

Patent Abstracts of Japan

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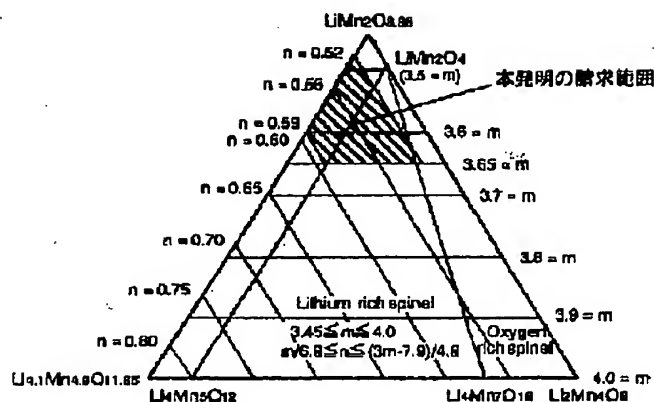
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TITLE : LITHIUM MANGANESE COMPOUND  
OXIDE, ITS PRODUCTION AND ITS  
USE



LiMn<sub>2</sub>O<sub>3.25</sub>-Li<sub>4.1</sub>Mn<sub>4.9</sub>O<sub>11.85</sub>-LiMn<sub>2</sub>O<sub>4</sub> 系三角ダイアグラム  
による非化学量組成のスピンル化合物の表示  
(斜線部は特許請求範囲を表す)

ABSTRACT : PROBLEM TO BE SOLVED: To produce a lithium manganese compound oxide for the positive electrode of a lithium cell.

SOLUTION: The lithium manganese compound oxide is a compd. consisting of Li, Mn and O, represented by the formula  $\text{Li}_{1+x}\text{Mn}_{2-y}\text{O}_4$  (where  $-0.01 < x < 0.15$  and  $0 < y < 0.15$ ) and having a cubic spinel structure. The atomic ratio of Li to Mn is 0.52-0.59 and the average oxidation number of Mn is 3.45-3.65. The multiple oxide has 0.821-0.824 nm lattice constant, 60-180 nm crystallite diameter and 1.0-3.7  $\text{m}^2/\text{g}$  BET specific surface area, contains at least  $\geq 3\%$  primary particles having  $\geq 1 \mu\text{m}$  particle diameter and has 1.0-15.0  $\mu\text{m}$  median diameter on the particle size distribution curve measured by a laser diffraction scattering method, an aggregation index of 5-20 and  $\geq 55\%$  press molding density.

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